

Johan Bobacka  
Laboratory of Molecular Science and Engineering  
Solutions for Health  
Technologies for a Sustainable Future  
**Email:** johan.bobacka@abo.fi  
**Mobile:** +358-469200208



## Biography

**Johan Bobacka**, D.Sc. (Tech.), is Professor of Analytical Chemistry and the Laboratory of Molecular Science and Engineering, Åbo Akademi University. Johan Bobacka's main research activities are in the area of electroanalytical chemistry and electrochemical sensors with special emphasis on the development of solid-contact ion-selective electrodes, solid-state reference electrodes and novel transduction principles for ion sensors. Research activities are also directed towards wearable chemical sensors and Johan Bobacka is a co-founder and senior scientific advisor of the company *GlucModicum Ltd* developing a platform for needle-free health monitoring. Johan Bobacka is an editor of *Sensors & Actuators: B. Chemical (Elsevier)* and a member of the editorial advisory board of *Electrochimica Acta (Elsevier)*. He is also a member of the editorial boards of *Chemosensors (MDPI)* and *Current topics in electrochemistry (Research Trends)*. Johan Bobacka is the chairman of the board of the profiling area *Technologies for a sustainable future* and chairman of the board of the *Johan Gadolin Process Chemistry Centre (PCC)* at Åbo Akademi University.

## Publications

### Novel Experimental Setup for Coulometric Signal Transduction of Ion-Selective Electrodes

Delmo, N., Mousavi, Z., Sokalski, T. & Bobacka, J., 2 Dec 2022, In: *Membranes*. 12, 12, p. 1221-1235 15 p.

### Novel design of a planar flow-through potentiometric sensor

Guagneli, L., Mousavi, Z., Sokalski, T., Leito, I. & Bobacka, J., 13 Sept 2022, In: *Journal of Electroanalytical Chemistry*. 923, p. 116785-116791 7 p.

### A review on conjugated polymer-based electronic tongues

Vahdatiyekta, P., Zniber, M., Bobacka, J. & Huynh, T-P., 15 Aug 2022, In: *Analytica Chimica Acta*. 1221, 340114.

### Long-Time Evaluation of Solid-State Composite Reference Electrodes

Blidi, S., Granholm, K., Sokalski, T., Mousavi, Z., Lewenstam, A., Leito, I. & Bobacka, J., 30 May 2022, In: *Membranes*. 12, 6, p. 569-579 11 p.

### Amperometric response of solid-contact ion-selective electrodes utilizing a two-compartment cell and a redox couple in solution

Han, T., Song, T., Bao, Y., Sun, Z., Ma, Y., He, Y., Gan, S., Jiang, D., Han, D., Bobacka, J. & Niu, L., 2022, In: *Journal of Electroanalytical Chemistry*. 922, 8 p., 116683.

### Analytisk kemi – några reflektioner

Bobacka, J., 2022, In: *Annales Academiae Scientiarum Fennicae*. 1, 1, p. 94-107

### Anomalous potentiometric response of solid-contact ion-selective electrodes with thin-layer membranes

Han, T., Kalinichev, A. V., Mousavi, Z., Mikhelson, K. N. & Bobacka, J., 2022, In: *Sensors and Actuators B: Chemical*. 357, 131416.

### Coulometric ion sensing with Li<sup>+</sup>-selective LiMn<sub>2</sub>O<sub>4</sub> electrodes

Lyu, Y., Han, T., Zhong, L., Tang, Y., Xu, L., Ma, Y., Bao, Y., Gan, S., Bobacka, J. & Niu, L., 2022, In: *Electrochemistry Communications*. 139, 7 p., 107302.

### Influence of enzyme immobilization and skin-sensor interface on non-invasive glucose determination from interstitial fluid obtained by magnetohydrodynamic extraction

Kemp, E., Palomäki, T., Ruuth, I. A., Boeva, Z. A., Nurminen, T. A., Vänskä, R. T., Zschachner, L. K., García Pérez, A., Hakala, T. A., Wardale, M., Hægström, E. & Bobacka, J., 2022, In: *Biosensors and Bioelectronics*. 206, 10 p., 114123.

**Perchlorate Solid-Contact Ion-Selective Electrode Based on Dodecabenzy bambus[6]juril**

Itterheimová, P., Bobacka, J., Sindelár, V. & Lubal, P., 2022, In: Chemosensors. 10, 3

**Pilot study in human healthy volunteers on the use of magnetohydrodynamics in needle-free continuous glucose monitoring**

Hakala, T. A., Zschaechner, L. K., Vänskä, R. T., Nurminen, T. A., Wardale, M., Morina, J., Boeva, Z. A., Saukkonen, R., Alakoskela, J.-M., Pettersson-Fernholm, K., Hæggström, E., Bobacka, J. & García Pérez, A., 2022, In: Scientific Reports. 12, 1, 11 p., 18318.

**Gold-modified paper as microfluidic substrates with reduced biofouling in potentiometric ion sensing**

Ding, R., Joon, N. K., Ahamed, A., Shafaat, A., Guzinski, M., Wagner, M., Ruzgas, T., Bobacka, J. & Lisak, G., 1 Oct 2021, In: Sensors and Actuators, B: Chemical. 344, 130200.

**Dependence of the potentiometric response of PEDOT(PSS) on the solubility product of silver salts**

Oña, J. P., Mousavi, Z., Sokalski, T., Leito, I. & Bobacka, J., 10 Sept 2021, In: Electrochimica Acta. 390, 138854.

**Environmental footprint of voltammetric sensors based on screen-printed electrodes: An assessment towards "green" sensor manufacturing**

Ahamed, A., Ge, L., Zhao, K., Veksha, A., Bobacka, J. & Lisak, G., Sept 2021, In: Chemosphere. 278, 130462.

**In situ catalytic reforming of plastic pyrolysis vapors using MSW incineration ashes**

Ahamed, A., Liang, L., Chan, W. P., Tan, P. C. K., Yip, N. T. X., Bobacka, J., Veksha, A., Yin, K. & Lisak, G., 1 May 2021, In: Environmental Pollution. 276, 116681.

**Sampling of fluid through skin with magnetohydrodynamics for noninvasive glucose monitoring**

Hakala, T. A., García Pérez, A., Wardale, M., Ruuth, I. A., Vänskä, R. T., Nurminen, T. A., Kemp, E., Boeva, Z. A., Alakoskela, J. M., Pettersson-Fernholm, K., Hæggström, E. & Bobacka, J., Apr 2021, In: Scientific Reports. 11, 1, 7609.

**Highly sensitive and stable fructose self-powered biosensor based on a self-charging biosupercapacitor**

Bollella, P., Boeva, Z., Latonen, R.-M., Kano, K., Gorton, L. & Bobacka, J., 15 Mar 2021, In: Biosensors and Bioelectronics. 176, 112909.

**Polymer-Drug Conjugates as Nanotheranostic Agents**

Manandhar, S., Sjöholm, E., Bobacka, J., Rosenholm, J. M. & Bansal, K. K., 13 Mar 2021, In: Journal of Nanotheranostics. 2, 1, p. 63-81

**Multilayer and Surface Immobilization of EDOT-Decorated Nanocapsules**

Hambly, B., Sears, C., Guzinski, M., Perez, F., Latonen, R.-M., Bobacka, J., Pendley, B. & Lindner, E., 29 Dec 2020, In: Langmuir. 37, 1, p. 499-508 1.

**Potentiometric Carboxylate Sensors Based on Carbazole-Derived Acyclic and Macrocyclic Ionophores**

Yrjänä, V., Saar, I., Ilisson, M., Kadam, S. A., Leito, I. & Bobacka, J., 24 Dec 2020, In: Chemosensors. 9, 1, 26 p., 4.

**Coulometric response of solid-contact anion-sensitive electrodes**

Han, T., Mattinen, U., Mousavi, Z. & Bobacka, J., 27 Nov 2020, In: Electrochimica Acta. 367, 137566.

**Solid reference electrode integrated with paper-based microfluidics for potentiometric ion sensing**

Ding, R., Fiedoruk-Pogrebniak, M., Pokrzywnicka, M., Koncki, R., Bobacka, J. & Lisak, G., 15 Nov 2020, In: Sensors and Actuators B: Chemical. 323, 10 p., 128680.

**Polyterthiophenes Cross-Linked with Terpyridyl Metal Complexes for Molecular Architecture of Optically and Electrochemically Tunable Materials**

Wagner, M., Wagner, K., Barnsley, J. E., Veksha, A., Wagner, P., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A., Officer, D. L. & Lisak, G., 2 Nov 2020, In: ChemElectroChem. 7, 21, p. 4453-4459

**LogP determination for highly lipophilic hydrogen-bonding anion receptor molecules**

Tshepelevitsh, S., Kadam, S., Darnell, A., Bobacka, J., Rützel, A., Haljasorg, T. & Leito, I., 2 Oct 2020, In: *Analytica Chimica Acta*. 1132, p. 123-133

**On-line microcolumn-based dynamic leaching method for investigation of lead bioaccessibility in shooting range soils**

Joon, N., Ek, P., Zevenhoven, M., Hupa, L., Miró, M., Bobacka, J. & Lisak, G., Oct 2020, In: *Chemosphere*. 256, p. – 9 p., 127022.

**Too small to matter? Physicochemical transformation and toxicity of engineered nTiO<sub>2</sub>, nSiO<sub>2</sub>, nZnO, carbon nanotubes, and nAg**

Ahamed, A., Liang, L., Lee, M. Y., Bobacka, J. & Lisak, G., 28 Sept 2020, In: *Journal of Hazardous Materials*. 404, 21 p., 124107.

**Life cycle assessment of plastic grocery bags and their alternatives in cities with confined waste management structure: A Singapore case study**

Ahamed, A., Vallam, P., Iyer, N. S., Veksha, A., Bobacka, J. & Lisak, G., 29 Aug 2020, In: *Journal of Cleaner Production*. 278, 11 p., 123956.

**Design, synthesis and application of carbazole macrocycles in anion sensors**

Rützel, A., Yrjänä, V., Kadam, S. A., Saar, I., Ilisson, M., Darnell, A., Haav, K., Haljasorg, T., Toom, L., Bobacka, J. & Leito, I., 4 Aug 2020, In: *Beilstein Journal of Organic Chemistry*. 16, p. 1901-1914 14 p.

**Coulometric response characteristics of solid contact ion-selective electrodes for divalent cations**

Han, T., Mousavi, Z., Mattinen, U. & Bobacka, J., 15 Jun 2020, In: *Journal of Solid State Electrochemistry*. 24, 11-12, p. 2975-2983

**Electrochemical sensors for real-world applications**

Bobacka, J., 11 Jun 2020, In: *Journal of Solid State Electrochemistry*. 24, 9, p. 2039-2040 2 p.

**Real-time monitoring of the dissolution of silver nanoparticles by using a solid-contact Ag<sup>+</sup>-selective electrode**

Yin, T., Han, T., Li, C., Qin, W. & Bobacka, J., 8 Mar 2020, In: *Analytica Chimica Acta*. 1101, p. 50-57

**Silver(I)-selective electrodes based on rare earth element double-decker porphyrins**

Joon, N., Barnsley, J. E., Ding, R., Lee, S., Latonen, R-M., Bobacka, J., Gordon, K. C., Ogawa, T. & Lisak, G., Feb 2020, In: *Sensors and Actuators B: Chemical*. 305, p. – 8 p., 127311.

**Antimicrobial Colloidal Silver-Lignin Particles via Ion and Solvent Exchange**

Lintinen, K., Luiro, S., Figueiredo, P., Sakarinen, E., Mousavi, Z., Seitsonen, J., GNS, R., Mattinen, U., Niemelä, M., Tammela, P., Österberg, M., L-S, J., Bobacka, J., Santos, HA. & Kostianen, MA., 2019, In: *ACS Sustainable Chemistry and Engineering*. 7, 18, p. 15297–15303 13 p.

**Bioimpedance Sensor Array for Long-Term Monitoring of Wound Healing from Beneath the Primary Dressings and Controlled Formation of H<sub>2</sub>O<sub>2</sub> Using Low-Intensity Direct Current**

Kekonen, A., Bergelin, M., Johansson, M., Joon, N. K., Bobacka, J. & Viik, J., 2019, In: *Sensors*. 19, 11, p. – 12 p.

**EACH (Excellence in Analytical Chemistry), an Erasmus Mundus Joint Programme: progress and success**

Leito, I., Teearu, A., Bobacka, J., Randon, J. & Bergquist, J., 2019, In: *Analytical and Bioanalytical Chemistry*. 411, p. 5913–5921 9 p.

**Electrochemically controlled transport of anions across polypyrrole-based membranes**

Arroyo, J., Akiel-Pirkanniemi, M., Lisak, G., Latonen, R-M. & Bobacka, J., 2019, In: *Journal of Membrane Science*. 581, p. 50–57

**Gadolinium retention in gliomas and adjacent normal brain tissue: association with tumor contrast enhancement and linear/macrocyclic agents**

Kiviniemi, A., Gardberg, M., Ek, P., Frantzén, J., Bobacka, J. & Minn, H., 2019, In: *Neuroradiology*. 61, 5, p. 535–544 10 p.

**Improving the Sensitivity of Solid-Contact Ion-Selective Electrodes by Using Coulometric Signal Transduction**

Han, T., Mattinen, U. & Bobacka, J., 2019, In: *ACS Sensors*. 4, 4, p. 900–906 13 p.

**Molecularly imprinted conducting polymer for determination of a condensed lignin marker**

Gonzalez-Vogel, A., Fogde, A., Crestini, C., Sandberg, T., Huynh, T. P. & Bobacka, J., 2019, In: *Sensors and Actuators B: Chemical*. 295, p. 186–193 8 p.

**PVC-Based Ion-Selective Electrodes with a Silicone Rubber Outer Coating with Improved Analytical Performance**

Joon, N., He, N., Ruzgas, T., Bobacka, J. & Lisak, G., 2019, In: *Analytical Chemistry*. 91, 16, p. 10524–10531 8 p.

**Solid-contact Acetate-selective Electrode Based on a 1,3-bis(carbazolyl)urea-ionophore**

Martin, K., S A, K., Mattinen, U., Bobacka, J. & Leito, I., 2019, In: *Electroanalysis*. 31, 6, p. 1061–1066 6 p.

**Application of terpyridyl ligands to tune the optical and electrochemical properties of a conducting polymer**

Lisak, G., Wagner, K., Barnsley, J. E., Veksha, A., Huff, G., S. Elliott, A. B., Wagner, P., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A. & Officer, D. L., 2018, In: *RSC Advances*. 8, p. 29505–29512 8 p.

**Calcium-selective electrodes based on photo-cured polyurethane-acrylate membranes covalently attached to methacrylate functionalized poly(3,4-ethylenedioxythiophene) as solid-contact**

Ocana Tejada, C., Abramova, N., Bratov, A., Lindfors, T. & Bobacka, J., 2018, In: *Talanta*. 186, p. 279–285

**Capacitive Model for Coulometric Readout of Ion-Selective Electrodes**

Jarolímová, Z., Han, T., Mattinen, U., Bobacka, J. & Bakker, E., 2018, In: *Analytical Chemistry*. 90, 14, p. 8700–8707 8 p.

**Controlled time release and leaching of silver nanoparticles using a thin immobilizing layer of aluminum oxide**

Brobbe, K., Haapanen, J., Gunell, M., Toivakka, M., Mäkelä, J. M., Eerola, E., Ali, R., Saleem, M. R., Honkanen, S., Bobacka, J. & Saarinen, J., 2018, In: *Thin Solid Films*. 645, p. 166–172 7 p.

**Electrosynthesized polypyrrole/zeolite composites as solid contact in potassium ion-selective electrode**

Yu, K., He, N., Kumar, N., Wang, N., Bobacka, J. & Ivaska, A., 2017, In: *Electrochimica Acta*. 228, p. 66–75

**Influence of phosphate buffer and proteins on the potentiometric response of a polymeric membrane-based solid-contact Pb(II) ion-selective electrode**

Joon, N. K., He, N., Wagner, M., Cárdenas, M., Bobacka, J. & Lisak, G., 2017, In: *Electrochimica Acta*. 252, p. 490–497

**Paper-based microfluidic sampling and separation of analytes for potentiometric ion sensing**

Ding, J., He, N., Lisak, G., Qin, W. & Bobacka, J., 2017, In: *Sensors and Actuators B: Chemical*. 243, p. 346–352

**A novel modified terpyridine derivative as a model molecule to study kinetic-based optical spectroscopic ion determination methods**

Lisak, G., Wagner, K., Wagner, P., Barnsley, J. E., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A. & Officer, D. L., 2016, In: *Synthetic Metals*. 219, p. 101–108

**Biomimetic membranes based on molecularly imprinted conducting polymers as a sensing element for determination of taurine**

Kupis-Rozmysłowicz, J., Wagner, M., Bobacka, J., Lewenstam, A. & Migdalski, J., 2016, In: *Electrochimica Acta*. 188, p. 537–544

**Hand-held transistor based electrical and multiplexed chemical sensing system**

Kaisti, M., Boeva, Z., Koskinen, J., Nieminen, S., Bobacka, J. & Levon, K., 2016, In: ACS Sensors. 1, 12, p. 1423–1431

**Influence of electrode geometry on the response of solid-contact ion-selective electrodes when utilizing a new coulometric signal readout method**

Han, T., Vanamo, U. & Bobacka, J., 2016, In: ChemElectroChem. 3, 12, p. 2071–2077

**In situ potentiometry and ellipsometry: a promising tool to study biofouling of potentiometric sensors**

Lisak, G., Arnebrant, T., Lewenstam, A., Bobacka, J. & Ruzgas, T., 2016, In: Analytical Chemistry. 88, 6, p. 3009–3014

**Ion-selective electrodes with 3D nanostructured conducting polymer solid contact**

Szűcs, J., Lindfors, T., Bobacka, J. & Gyurcsányi, R. E., 2016, In: Electroanalysis. 28, 4, p. 778–786

**New signal readout principle for solid-contact ion-selective electrodes**

Vanamo, U., Hupa, E., Yrjänä, V. & Bobacka, J., 2016, In: Analytical Chemistry. 88, 8, p. 4369–4374

**Paper-based potentiometric ion sensors constructed on ink-jet printed gold electrodes**

Sjöberg, P., Määttänen, A., Vanamo, U., Peltonen, J., Mattinen, U., Andrade, F. J., Bobacka, J. & Ihalainen, P., 2016, In: Sensors and Actuators B: Chemical. 224, p. 325–332

**Specific electrocatalytic oxidation of cellulose at carbon electrodes modified by gold nanoparticles**

Sugano, Y., Kumar, N., Peurla, M., Roine, J., Aho, A., Bobacka, J. & Mikkola, J-P., 2016, In: ChemCatChem. 8, 14, p. 2401–2405

**Study of Adhesion Force Between Cellulose Microsphere and Cellulose Membrane**

Lai, YL., Kallio, P., Zhang, H., Xie, H., Sugano, Y. & Bobacka, J., 2016, In: 2015 INTERNATIONAL CONFERENCE ON MANIPULATION, MANUFACTURING AND MEASUREMENT ON THE NANOSCALE (3M-NANO). p. 125–129 5 p.

**Tuned ionophore-based bi-membranes for selective transport of target ions**

Akieh-Pirkanniemi, M., Lisak, G., Arroyo Condori, J., Bobacka, J. & Ivaska, A., 2016, In: Journal of Membrane Science. 511, p. 76–83

**Adhesive Behavior Study between Cellulose and Borosilicate Glass using Colloidal Probe Technique**

Lai, YL., Kallio, P., Sugano, Y. & Bobacka, J., 2015, In: 2015 INTERNATIONAL CONFERENCE ON MANIPULATION, MANUFACTURING AND MEASUREMENT ON THE NANOSCALE (3M-NANO). p. 85–89 5 p.

**Application of the catalyst wet pretreatment method (CWPM) for catalytic direct synthesis of H<sub>2</sub>O<sub>2</sub>**

Biasi, P., Sterchele, S., Bizzotto, F., Manzoli, M., Lindholm, S., Ek, P., Bobacka, J., Mikkola, J-P. & Salmi, T., 2015, In: Catalysis Today. 246, p. 207–215

**Electro-catalytic oxidation of hemicelluloses at the Au electrode**

Sugano, Y., Saloranta-Simell, T., Bobacka, J. & Ivaska, A., 2015, In: Physical Chemistry Chemical Physics. 17, 17, p. 11609–11614 6 p.

**Novel ion-to-electron transduction principle for solid-contact ISEs**

Hupa, E., Vanamo, U. & Bobacka, J., 2015, In: Electroanalysis. 27, 3, p. 591–594

**Paper-based microfluidic sampling for potentiometric determination of ions**

Lisak, G., Cui, C. & Bobacka, J., 2015, In: Sensors and Actuators B: Chemical. 207, p. 933–939 7 p.

**Solid-contact lead(II) ion-selective electrodes for potentiometric determination of lead(II) in presence of high concentrations of Na(I), Cu(II), Cd(II), Zn(II), Ca(II) and Mg(II)**

Jasiński, A., Guziński, M., Lisak, G., Bobacka, J. & Bocheńska, M., 2015, In: Sensors and Actuators B: Chemical. 218, p. 25–30 6 p.

**Textile-based sampling for potentiometric determination of ions**

Lisak, G., Arnebrant, T., Ruzgas, T. & Bobacka, J., 2015, In: Analytica Chimica Acta. 877, p. 71–79

**Transportation and accumulation of redox active species at the buried interfaces of plasticized membrane electrodes**

Sohail, M., De Marco, R., Jarolímová, Z., Pawlak, M., Bakker, E., He, H., Latonen, R-M., Lindfors, T. & Bobacka, J., 2015, In: Langmuir. 31, 38, p. 10599–10609 11 p.

**Electrocatalytic oxidation of cellulose at a gold electrode**

Sugano, Y., Latonen, R-M., Akieh-Pirkanniemi, M., Bobacka, J. & Ivaska, A., 2014, In: ChemSusChem. 7, 8, p. 2240–2247

**Electrochemical control of the standard potential of solid-contact ion-selective electrodes having a conducting polymer as ion-to-electron transducer**

Vanamo, U. & Bobacka, J., 2014, In: Electrochimica Acta. 122, Special Issue, p. 316–321 6 p.

**Electrospun TiO<sub>2</sub> nanofibers decorated Ti substrate for biomedical application**

Dimitriu, C., Bogdan Stoian, A., Titorencu, I., Pruna, V., Jinga, V. V., Latonen, R-M., Bobacka, J. & Demetrescu, I., 2014, In: Materials Science and Engineering: C. 45, p. 56–63

**Instrument-Free Control of the Standard Potential of Potentiometric Solid-Contact Ion-Selective Electrodes by Short-Circuiting with a Conventional Reference Electrode**

Vanamo, U. & Bobacka, J., 2014, In: Analytical Chemistry. 86, 21, p. 10540–10545

**Multicalibrational procedure for more reliable analyses of ions at low analyte concentrations**

Lisak, G., Ivaska, A., Lewenstam, A. & Bobacka, J., 2014, In: Electrochimica Acta. 140, Special issue, p. 27–32 6 p.

**Potentiometric sensing utilizing paper-based microfluidic sampling**

Cui, J., Lisak, G., Strzalkowska, S. & Bobacka, J., 2014, In: Analyst. 139, 9, p. 2133–2136 4 p.

**A low-cost paper-based inkjet-printed platform for electrochemical analyses**

Määtänen, A., Vanamo, U., Ihalainen, P., Pulkkinen, P., Tenhu, H., Bobacka, J. & Peltonen, J., 2013, In: Sensors and Actuators B: Chemical. 177, p. 153–162 10 p.

**Determination of Lead(II) in Groundwater Using Solid-State Lead(II) Selective Electrodes by Tuned Galvanostatic Polarization**

Lisak, G., Ciepiela, F., Bobacka, J., Sokalski, T., Harju, L. & Lewenstam, A., 2013, In: Electroanalysis. 25, 1, p. 123–131 9 p.

**Durable PEDOT:PSS films obtained from modified water-based inks for electrochemical sensors**

Wagner, M., Lisak, G., Ivaska, A. & Bobacka, J., 2013, In: Sensors and Actuators B: Chemical. 181, p. 694–701 8 p.

**Electrochemical and spectroscopic study on thiolation of polyaniline**

Blomquist, M., Bobacka, J., Ivaska, A. & Levon, K., 2013, In: Electrochimica Acta. 90, p. 604–614 11 p.

**Electrochemical properties of novel porous carbon based material synthesized from polycyclic aromatic hydrocarbons**

Wagner, M., Kvarnström, C., Ivaska, A. & Bobacka, J., 2013, In: Electrochimica Acta. 105, p. 384–393 10 p.

**Electrochemical study of novel nanostructured In<sub>2</sub>S<sub>3</sub> and its effect on oxidative damage to DNA purine bases**

Ferancova, A., Rengaraj, S., Kim, Y., Vijayalakshmi, S., Labuda, J., Bobacka, J. & Sillanpää, M., 2013, In: Electrochimica Acta. 92, p. 124–131 8 p.

**Electrochemical synthesis and characterization of poly(3,4-ethylenedioxythiophene) doped with sulfonated calixarenes and sulfonated calixarene-fullerene complexes**

Dumitriua, C., Mousavi, Z., Latonen, R-M., Bobacka, J. & Demetrescu, I., 2013, In: *Electrochimica Acta*. 107, p. 178–186 9 p.

**Investigation of protein binding with all solid-state ion-selective electrodes**

Prabhu, A., Bobacka, J., Ivaska, A. & Levon, K., 2013, In: *Electroanalysis*. 25, 8, p. 1887–1894 8 p.

**Ion exchange behavior of polypyrrole doped with large anions in electrolytes containing mono- and divalent metal ions**

Latonen, R-M., Akieh-Pirkanniemi, M., Vavra, K., Bobacka, J. & Ivaska, A., 2013, In: *Electroanalysis*. 25, 4, p. 991–1004 14 p.

**Solid-contact ion-selective electrodes with highly selective thioamide derivatives of p-tert-butylcalix[4]arene for the determination of lead(II) in environmental samples**

Guziński, M., Lisak, G., Sokalski, T., Bobacka, J., Ivaska, A., Bocheńska, M. & Lewenstam, A., 2013, In: *Analytical Chemistry*. 85, 3, p. 1555–1561 7 p.

**Direct electron transfer of *Trametes hirsuta* laccase in a dual-layer-architecture of poly(3,4-ethylenedioxythiophene) films**

Wang, X., Latonen, R-M., Sjöberg-Eerola, P., Bobacka, J., Bergelin, M., Boer, H. & Eriksson, J.E., 2012, In: *Abstracts of Papers of the American Chemical Society*. 243, p. – 1 p.

**Disposable solid-contact ion-selective electrodes for environmental monitoring of lead with ppb limit-of-detection**

Anastasova, S., Radu, A., Matzeu, G., Zuliani, C., Mattinen, U., Bobacka, J. & Diamond, D., 2012, In: *Electrochimica Acta*. 73, p. 93–97 5 p.

**Electrochemical Sensors: From nanoscale engineering to industrial applications. Selection of papers from the 9th ISE Spring Meeting 8-11 May 2011, Turku, Finland: Foreword**

Bobacka, J., 2012, In: *Electrochimica Acta*. 73, p. 1–2 2 p.

**Impedance study of thiolated polyaniline**

Blomquist, M., Bobacka, J., Ivaska, A. & Levon, K., 2012, In: *Journal of Solid State Electrochemistry*. 16, p. 2783–2789 7 p.

**Mediatorless sugar/oxygen enzymatic fuel cells based on gold nanoparticle-modified electrodes**

Wang, X., Falk, M., Ortiz, R., Matsumura, H., Bobacka, J., Ludwig, R., Bergelin, M., Gorton, L. & Shleev, S., 2012, In: *Biosensors and Bioelectronics*. 33, 1, p. 219–225

**Poly(3,4-ethylenedioxythiophene) based enzyme-electrode configuration for enhanced direct electron transfer type biocatalysis of oxygen reduction**

Latonen, R-M., Wang, X., Sjöberg-Eerola, P., Eriksson, J-E., Bergelin, M. & Bobacka, J., 2012, In: *Electrochimica Acta*. 68, p. 25–31

**Recovery of nanomolar detection limit of solid-contact lead (II)-selective electrodes by electrode conditioning**

Lisak, G., Bobacka, J. & Lewenstam, A., 2012, In: *Journal of Solid State Electrochemistry*. 16, p. 2983–2991 9 p.

**Reduced Graphene Oxide Films as Solid Transducers in Potentiometric All-Solid-State Ion-Selective Electrodes**

Hernández, R., Riu, J., Bobacka, J., Vallés, C., Jiménez, P., Benito, A. M., Maser, W. K. & Xavier Rius, F., 2012, In: *Journal of Physical Chemistry C*. 116, 42, p. 22570–22578 9 p.

**Roll to roll printed electronics on paper**

Bollström, R., Tobjork, D., Dolietis, P., Remonen, T., Wikman, C-J., Viljanen, S., Sarfraz, J., Salminen, P., Linden, M., Wilen, C-E., Bobacka, J., Österbacka, R. & Toivakka, M., 2012, *Paper conference and trade show 2012 (PaperCon 2012) : growing the future*. TAPPI Press, p. 252–

**Comparison of multi-walled carbon nanotubes and poly(3-octylthiophene) as ion-to-electron transducers in all-solid-state potassium ion-selective electrodes**

Mousavi, Z., Teter, A., Lewenstam, A., Maj-Zurawska, M., Ivaska, A. & Bobacka, J., 2011, In: *Electroanalysis*. 23, 6, p. 1352–1358 7 p.

**Direct Electron Transfer of *Trametes hirsuta* Laccase in a Dual-Layer Architecture of Poly(3,4-ethylenedioxythiophene) Films**

Wang, X., Latonen, R-M., Sjöberg-Eerola, P., Eriksson, J-E., Bobacka, J., Boer, H. & Bergelin, M., 2011, In: *Journal of Physical Chemistry C*. 115, 13, p. 5919–5929

**Electrochemically controlled ion transport across polypyrrole/multi-walled carbon nanotube composite membranes**

Akieh-Pirkanniemi, M., Latonen, R-M., Lindholm, S., Ralph, S. F., Bobacka, J. & Ivaska, A., 2011, In: *Synthetic Metals*. 161, 17-18, p. 1906–1914

**Electrodeposition of PEDOT-Cl film on a fully printed Ag/polyaniline electrode**

Ihalainen, P., Määttänen, A., Mattinen, U., Stepien, M., Bollström, R., Toivakka, M., Bobacka, J. & Peltonen, J., 2011, In: *Thin Solid Films*. 519, 7, p. 2172–2175 4 p.

**Immobilization of *Trametes hirsuta* laccase into poly(3,4-ethylenedioxythiophene) and polyaniline polymer-matrices**

Wang, X., Sjöberg-Eerola, P., Immonen, K., Bobacka, J. & Bergelin, M., 2011, In: *Journal of Power Sources*. 196, 11, p. 4957–4964

**Impedance study of the ion-to-electron transduction process for carbon cloth as solid-contact material in potentiometric ion sensors**

Mattinen, U., Rabiej, S., Lewenstam, A. & Bobacka, J., 2011, In: *Electrochimica Acta*. 56, 28, p. 10683–10687 5 p.

**Ionic Liquid-Based, Liquid-Junction-Free Reference Electrode**

Cicmil, D., Anastasova, S., Kavanagh, A., Diamond, D., Mattinen, U., Bobacka, J., Lewenstam, A. & Radu, A., 2011, In: *Electroanalysis*. 23, 8, p. 1881–1890 10 p.

**Simultaneous monitoring of the transport of anions and cations across polypyrrole based composite membranes**

Akieh-Pirkanniemi, M., Varga, Á., Latonen, R-M., Ralph, S. F., Bobacka, J. & Ivaska, A., 2011, In: *Electrochimica Acta*. 56, 10, p. 3507–3515 9 p.

**Tuned galvanostatic polarization of solid-state lead-selective electrodes for lowering of the detection limit**

Lisak, G., Sokalski, T., Bobacka, J., Harju, L., Mikhelson, K. & Lewenstam, A., 2011, In: *Analytica Chimica Acta*. 707, 1-2, p. 1–6 6 p.

**A study on lowering the detection limit with solid-state lead-selective electrodes**

Lisak, G., Sokalski, T., Bobacka, J., Harju, L. & Lewenstam, A., 2010, In: *Talanta*. 83, p. 436–440 5 p.

**Development of miniature all-solid-state potentiometric sensing system**

Anastasova-Ivanova, S., Mattinen, U., Radu, A., Bobacka, J., Lewenstam, A., Migdalski, J., Danielewski, M. & Diamond, D., 2010, In: *Sensors and Actuators B: Chemical*. 146, p. 199–205 7 p.

**Diagnostic of functionality of polymer membrane - based ion selective electrodes by impedance spectroscopy**

Radu, A., Anastasova-Ivanova, S., Paczosa-Bator, B., Danielewski, M., Bobacka, J., Lewenstam, A. & Diamond, D., 2010, In: *Analytical Methods*. 2, p. 1490–1498 9 p.

**Electrochemical Behaviour of Poly(benzopyrene) Films Doped with Eriochrome Black T as a Pb<sup>2+</sup>-Sensitive Sensors**

Lisak, G., Wagner, M., Kvarnström, C., Bobacka, J., Ivaska, A. & Lewenstam, A., 2010, In: *Electroanalysis*. 22, 23, p. 2794–2800 7 p.



**Low Cost, Calibration-free Sensors for In Situ Determination of Natural Water Pollution**

Radu, A., Anastasova, S., Fay, C., Diamond, D., Bobacka, J. & Lewenstam, A., 2010, *Proceedings of IEEE Sensors*. IEEE , p. 1487–1490 4 p.

**Printed electrodes on tailored paper enable electrochemical functionalization of paper**

Peltonen, J., Määttä, A., Bollström, R., Toivakka, M., Mattinen, U., Stpień, M., Bobacka, J., Saarinen, J. & Ihalainen, P., 2010, *International Conference on Nanotechnology for the Forest Products Industry 2010*. p. 57-76 20 p. (International Conference on Nanotechnology for the Forest Products Industry 2010).

**The effect of counter ions and substrate material on the growth and morphology of poly(3,4-ethylenedioxythiophene) films: Towards the application of enzyme electrode construction in biofuel cells**

Wang, X., Sjöberg-Eerola, P., Eriksson, J-E., Bobacka, J. & Bergelin, M., 2010, In: *Synthetic Metals*. 160, 13-14, p. 1373–1381

**Transport of metal ions across an electrically switchable cation exchange membrane based on polypyrrole doped with a sulfonated calix[6]arene**

Akieh-Pirkanniemi, M., Ralph, S. F., Bobacka, J. & Ivaska, A., 2010, In: *Journal of Membrane Science*. 354, 1-2, p. 162–170 9 p.

**All-Solid-State Potassium Ion-Selective Electrode with Conducting Polymer Doped with Carbon Nanotubes and C(60) as the Ion-to-Electron Transducing Layers**

Mousavi, Z., Han, T., Kvarnstrom, C., Bobacka, J. & Ivaska, A., 2009, In: *ECS Transactions*. 19, 6, p. 19–26 8 p.

**Determination of Calcium with Ion-Selective Electrode in Black Liquor from a Kraft Pulping Process**

Granhölm, K., Ek, P., Sokalski, T., Harju, L., Bobacka, J. & Ivaska, A., 2009, In: *Electroanalysis*. 21, 17-18, p. 2014–2021 8 p.

**Electropolymerization of N-Hydroxyethylcarbazole on Carbon Fiber Microelectrodes**

Parlak, EA., Sarac, AS., Serantoni, M. & Bobacka, J., 2009, In: *Journal of Applied Polymer Science*. 113, 1, p. 136–142 7 p.

**Electropolymerization of N-methylantranilic acid and spectroelectrochemical characterization of the formed film**

Blomquist, M., Lindfors, T., Latonen, R-M. & Bobacka, J., 2009, In: *Synthetic Metals*. 159, 1-2, p. 96–102

**Ion exchange behaviour and charge compensation mechanism of polypyrrole in electrolytes containing mono-, di- and trivalent metal ions**

Akieh, MN., Price, WE., Bobacka, J., Ivaska, A. & Ralph, SF., 2009, In: *Synthetic Metals*. 159, 23-24, p. 2590–2598 9 p.

**Ion-Selective Organic Electrochemical Junction Transistors Based on Poly(3,4-ethylenedioxythiophene) Doped with Poly(styrene sulfonate)**

Mousavi, Z., Ekholm, A., Bobacka, J. & Ivaska, A., 2009, In: *Electroanalysis*. 21, 3-5, p. 472–479 8 p.

**New polyacrylate-based lead(II) ion-selective electrodes**

Lisak, G., Grygolowicz-Pawlak, E., Mazurkiewicz, M., Malinowska, E., Sokalski, T., Bobacka, J. & Lewenstam, A., 2009, In: *Microchimica Acta*. 164, 3-4, p. 293–297 5 p.

**Poly(3,4-ethylenedioxythiophene) (PEDOT) doped with carbon nanotubes as ion-to-electron transducer in polymer membrane-based potassium ion-selective electrodes**

Mousavi, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 2009, In: *Journal of Electroanalytical Chemistry*. 633, 1, p. 246–252 7 p.

**Preface**

Bobacka, J., 2009, In: *Journal of Solid State Electrochemistry*. 13, p. 1–2 2 p.

#### **Solid-Contact Reference Electrodes Based on Lipophilic Salts**

Mattinen, U., Bobacka, J. & Lewenstam, A., 2009, In: *Electroanalysis*. 21, 17-18, p. 1955–1960 6 p.

#### **Transduction Mechanism of Carbon Nanotubes in Solid-Contact Ion-Selective Electrodes**

Crespo, GA., Macho, S., Bobacka, J. & Rius, FX., 2009, In: *Analytical Chemistry*. 81, 2, p. 676–681 6 p.

#### **Electrochemical characterization of poly(3,4-ethylenedioxythiophene) (PEDOT) doped with sulfonated thiophenes**

Mousavi, Z., Alaviuhkola, T., Bobacka, J., Latonen, R-M., Pursiainen, J. & Ivaska, A., 2008, In: *Electrochimica Acta*. 53, 11, p. 3755–3762 8 p.

#### **Potentiometric ion sensors**

Bobacka, J., Ivaska, A. & Lewenstam, A., 2008, In: *Chemical Reviews*. 108, 2, p. 329–351 23 p.

#### **Soluble semiconducting poly(3-octylthiophene) as a solid-contact material in all-solid-state chloride sensors**

Sjoberg-Eerola, P., Nylund, J., Bobacka, J., Lewenstam, A. & Ivaska, A., 2008, In: *Sensors and Actuators B: Chemical*. 134, 2, p. 878–886 9 p.

#### **Speciation of Ca<sup>2+</sup> ions in black liquors determined by a Ca-ion-selective electrode**

Granholm, K., Harju, L., Bobacka, J. & Ivaska, A., 2008, *Proceedings The Second International Papermaking & Environmental Conference Book A*. Wang, L., Yonghau, N., Hou, Q. & Liu, Z. (eds.). p. 391–394 4 p.

#### **All-solid-state chloride sensors based on electronically conducting, semiconducting and insulating polymer membranes**

Sjoberg-Eerola, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 2007, In: *Sensors and Actuators B: Chemical*. 127, 2, p. 545–553 9 p.

#### **Conducting polymer-based solid-state ion-selective electrodes**

Bobacka, J., 2006, In: *Electroanalysis*. 18, 1, p. 7–18 12 p.

#### **Influence of morphology and topography on potentiometric response of magnesium and calcium sensitive PEDOT films doped with adenosine triphosphate (ATP)**

Paczosa-Bator, B., Peltonen, J., Bobacka, J. & Lewenstam, A., 2006, In: *Analytica Chimica Acta*. 555, 1, p. 118–127 10 p.

#### **Microcavity based solid-contact ion-selective microelectrodes**

Sundfors, F., Bereczki, R., Bobacka, J., Toth, K., Ivaska, A. & Gyurcsanyi, RE., 2006, In: *Electroanalysis*. 18, 13-14, p. 1372–1378 7 p.

#### **Response mechanism of potentiometric Ag<sup>+</sup> sensor based on poly(3,4-ethylenedioxythiophene) doped with silver hexabromocborane**

Mousavi, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 2006, In: *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*. 593, 1-2, p. 219–226 8 p.

#### **Operating principle of polymer insulator organic thin-film transistors exposed to moisture**

Backlund, TG., Osterbacka, R., Stubb, H., Bobacka, J. & Ivaska, A., 2005, In: *Journal of Applied Physics*. 98, p. – 6 p.

#### **Potentiometric Ag<sup>+</sup> sensors based on conducting polymers: A comparison between poly(3,4-ethylenedioxythiophene) and polypyrrole doped with sulfonated calixarenes**

Mousavi, Z., Bobacka, J. & Ivaska, A., 2005, In: *Electroanalysis*. 17, 18, p. 1609–1615 7 p.

#### **Potentiometric sensors based on poly(3,4-ethylenedioxythiophene) (PEDOT) doped with sulfonated calix[4]arene and calix[4]resorcarenes**

Bobacka, J., Luostarinen, M., Rissanen, K., Lewenstam, A., Ivaska, A. & Vázquez, M., 2005, In: *Journal of Solid State Electrochemistry*. 9, 5, p. 312–319 8 p.

**Potentiometric sensors for Ag<sup>+</sup> based on poly(3-octylthiophene) (POT)**

Bobacka, J., Ivaska, A. & Vázquez, M., 2005, In: *Journal of Solid State Electrochemistry*. 9, 12, p. 865–873 9 p.

**Synthesis, characterization, and complexation of tetraarylborates with aromatic cations and their use in chemical sensors**

Alaviuhkola, T., Bobacka, J., Nissinen, M., Rissanen, K., Ivaska, A. & Pursiainen, J., 2005, In: *Chemistry - A European Journal*. 11, 7, p. 2071–2080 10 p.

**All-solid-state chloride sensors with poly(3-octylthiophene) matrix and trihexadecylmethylammonium chlorides as an ion exchanger salt**

Sjoberg-Eerola, P., Bobacka, J., Sokalski, T., Mieczkowski, J., Ivaska, A. & Lewenstam, A., 2004, In: *Electroanalysis*. 16, 5, p. 379–385 7 p.

**All-solid-state ion sensors, using conducting polymers as ion-to-electron transducers**

Bobacka, J., Lindfors, T., Lewenstam, A. & Ivaska, A., 2004, In: *American Laboratory*. 36, 3, p. 13–20 6 p.

**EIS study of the redox reaction of Fe(CN)<sub>6</sub><sup>3-/4-</sup> poly(3,4-ethylenedioxythiophene) electrodes: influence of dc potential and c(Ox): c(Red) ratio**

Sundfors, F. & Bobacka, J., 2004, In: *Journal of Electroanalytical Chemistry*. 572, 2, p. 309–316 8 p.

**Electrochemical synthesis and characterization of poly(3,4-ethylenedioxythiophene) in ionic liquids with bulky organic anions**

Danielsson, P., Bobacka, J. & Ivaska, A., 2004, In: *Journal of Solid State Electrochemistry*. 8, 10, p. 809–817 9 p.

**Influence of anionic additive on Hg<sup>2+</sup> interference on Ag<sup>+</sup>-ISEs based on [2.2.2]p,p,p-cyclophane as neutral carrier**

Bobacka, J., Vaananen, V., Lewenstam, A. & Ivaska, A., 2004, In: *Talanta*. 63, 1, p. 135–138 4 p.

**Small-volume radial flow cell for all-solid-state ion-selective electrodes**

Bobacka, J., Ivaska, A., Lewenstam, A. & Vázquez, M., 2004, In: *Talanta*. 62, 1, p. 57–63 7 p.

**Solution-cast films of poly(3,4-ethylenedioxythiophene) as ion-to-electron transducers in all-solid-state ion-selective electrodes**

Danielsson, P., Bobacka, J., Lewenstam, A., Ivaska, A. & Vázquez, M., 2004, In: *Sensors and Actuators B: Chemical*. 97, 2-3, p. 182–189 8 p.

**Carbonate ion-selective electrode with reduced interference from salicylate**

Bobacka, J., Maj-Zurawska, M. & Lewenstam, A., 2003, In: *Biosensors and Bioelectronics*. 18, 2-3, p. 245–253 9 p.

**Potentiometric ion sensors based on conducting polymers**

Bobacka, J., Ivaska, A. & Lewenstam, A., 2003, In: *Electroanalysis*. 15, p. 366–374 9 p.

**Towards reversibility of ion transfer across the interface between valinomycin membranes and aqueous electrolyte solutions**

Mikhelson, KN., Bobacka, J., Lewenstam, A. & Ivaska, A., 2003, In: *Elektrokhimiya / Russian Journal of Electrochemistry*. 39, 7, p. 771–776 6 p.

**Influence of oxygen and carbon dioxide on the electrochemical stability of poly(3,4-ethylenedioxythiophene) used as ion-to-electron transducer in all-solid-state ion-selective electrodes**

Bobacka, J., Ivaska, A., Lewenstam, A. & Vázquez, M., 2002, In: *Sensors and Actuators B: Chemical*. 82, 1, p. 7–13 7 p.

**Kinetics of electron transfer between Fe(CN)<sub>6</sub><sup>3-/4-</sup> and poly(3,4-ethylenedioxythiophene) studied by electrochemical impedance spectroscopy**

Sundfors, F., Bobacka, J., Ivaska, A. & Lewenstam, A., 2002, *Electrochimica Acta*. Elsevier, p. 2245–2251 7 p.

**Selectivity of lithium electrodes: Correlation with ion-ionophore complex stability constants and with interfacial exchange current densities**

Mikhelson, KN., Bobacka, J., Ivaska, A., Lewenstam, A. & Bochenka, M., 2002, In: Journal of the American Chemical Society. 74, p. 518–527 10 p.

**Silver ion-selective electrodes based on pi-coordinating ionophores without heteroatoms**

Bobacka, J., Lahtinen, T., Koskinen, H., Rissanen, K., Lewenstam, A. & Ivaska, A., 2002, In: Electroanalysis. 14, p. 1353–1357 5 p.

**Solid-contact ion-selective electrodes for aromatic cations based on pi-coordinating soft carriers**

Bobacka, J., Alaviuhkola, T., Hietapelto, V., Koskinen, H., Lewenstam, A., Lämsä, M., Pursiainen, J. & Ivaska, A., 2002, In: Talanta. 58, 2, p. 341–349 9 p.

**All-solid-state Ag<sup>+</sup>-ISE based on [2.2.2]p,p,p-cyclophane**

Bobacka, J., Lahtinen, T., Nordman, J., Haggstrom, S., Rissanen, K., Lewenstam, A. & Ivaska, A., 2001, In: Electroanalysis. 13, p. 723–726 4 p.

**Determination of Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>, and Cl<sup>-</sup> ions in wood pulp suspension using ion-selective electrodes**

Vazquez, M., Mikhelson, K., Piepponen, S., Rama, J., Sillanpaa, M., Ivaska, A., Lewenstam, A. & Bobacka, J., 2001, In: Electroanalysis. 13, p. 1119–1124 6 p.

**Equilibrium potential of potentiometric ion sensors under steady-state current by using current-reversal chronopotentiometry**

Bobacka, J., Lewenstam, A. & Ivaska, A., 2001, In: Journal of Electroanalytical Chemistry. 509, 1, p. 27–30 4 p.

**Oxyethylene chain-cation complexation; Nonionic polyoxyethylene detergents attain a positive charge and demonstrate electrostatic head group interactions**

Hagerstrand, H., Bobacka, J., Bobrowska-Hagerstrand, M., Kralj-Iglic, V., Fosnaric, M. & Iglic, A., 2001, In: Cellular and Molecular Biology Letters. 6, p. 161–165 5 p.

**Potentiometric performance and interfacial kinetics of neutral ionophore based ISE membranes in interfering ion solutions before and after contact with primary ions**

Mikhelson, KN., Bobacka, J., Lewenstam, A. & Ivaska, A., 2001, In: Electroanalysis. 13, p. 876–881 6 p.

**Coupled Redox and pH Potentiometric Responses of Electrodes Coated with Polypyrrole**

Maksymiuk, K., Bobacka, J., Ivaska, A. & Lewenstam, A., 2000, In: Analytical Letters. 33, 7, p. 1339–1360 22 p.

**Electrochemical impedance spectroscopy of oxidized poly(3,4-ethylenedioxythiophene) film electrodes in aqueous solutions**

Bobacka, J., Lewenstam, A. & Ivaska, A., 2000, In: Journal of Electroanalytical Chemistry. 489, 1-2, p. 17–27 11 p.

**All-solid-state chloride-selective electrode based on poly(3-octylthiophene) and tridodecylmethylammonium chloride**

Sjoberg, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 1999, In: Electroanalysis. 11, p. 821–824 4 p.

**Characterization of a single-piece all-solid-state lithium-selective electrode based on soluble conducting polyaniline**

Lindfors, T., Sjöberg, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 1999, In: Analytica Chimica Acta. 385, 1-3, p. 163–173 11 p.

**Plasticizer-free all-solid-state potassium-selective electrode based on poly(3-octylthiophene) and valinomycin**

Bobacka, J., Ivaska, A. & Lewenstam, A., 1999, In: Analytica Chimica Acta. 385, 1-3, p. 195–202 8 p.

**Potential Stability of All-Solid-State Ion-Selective Electrodes Using Conducting Polymers as Ion-to-Electron Transducers**

Bobacka, J., 1999, In: Analytical Chemistry. 71, p. 4932–4937 6 p.

**Sensor panels and nonlinear modelling - a powerful combination**

Bobacka, J. & Bulsari, A., 1999, In: Svensk papperstidning. 102, 6, p. 85–

**Characterization of a single-piece all-solid-state lithium-selective electrode based on soluble conducting polyaniline**

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1998.

**Study on soluble polypyrrole as a component in all-solid-state ion-sensors**

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1998, In: Electrochimica Acta. 43, 23, p. 3503–3509 7 p.

**Electron transfer at conducting polymer film electrodes: Mechanism and kinetics of ferrocene oxidation at poly(3-octylthiophene)**

Bobacka, J., Grzeszczuk, M. & Ivaska, A., 1997, In: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 427, 1-2, p. 63–69 7 p.

**Electrosynthesis of polypyrrole in iodide solution. Film growth, redox behaviour and potentiometric response**

Lindfors, T., Bobacka, J. & Ivaska, A., 1997, In: Analytica Chimica Acta. 355, 2-3, p. 217–225 9 p.

**Metallic and non-metallic redox response of conducting polymers**

Maksymiuk, K., Nyback, AS., Bobacka, J., Ivaska, A. & Lewenstam, A., 1997, In: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 430, 1-2, p. 243–252 10 p.

**Impedance spectroscopic study on single-piece all-solid-state calcium-selective electrode based on polyaniline**

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1996, In: Analyst. 121, 12, p. 1823–1827 5 p.

**Single-piece all-solid-state calcium-selective electrode based on polyaniline. Part II: An impedance spectroscopic study**

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1996.

**Single-piece all-solid-state calcium-selective electrode based on polyaniline. Part I: Influence of membrane composition on potentiometric behaviour**

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1996.

**Single-piece all-solid-state ion-selective electrode**

Bobacka, J., Lindfors, T., McCarrick, M., Ivaska, A. & Lewenstam, A., 1995, In: Analytical Chemistry. 67, 20, p. 3819–3823 5 p.

**ALL-SOLID-STATE POLY(VINYL CHLORIDE) MEMBRANE ION-SELECTIVE ELECTRODES WITH POLY(3-OCTYLTHIOPHENE) SOLID INTERNAL CONTACT**

Bobacka, J., MCCARRICK, M., Lewenstam, A. & Bobacka, J., 1994, In: Analyst. 119, 9, p. 1985–1991 7 p.

**ELECTROCHEMICAL-BEHAVIOR OF POLYPYRROLE FILM POLYMERIZED IN INDIGO CARMINE SOLUTION**

GAO, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 1994, In: Electrochimica Acta. 39, 5, p. 755–762 8 p.

**ELECTROCHEMICAL PROPERTIES OF POLYPYRROLE FILMS POLYMERIZED IN THE PRESENCE OF METHYLENE-BLUE**

GAO, ZQ., Bobacka, J., Lewenstam, A. & Ivaska, A., 1994, In: Synthetic Metals. 62, 2, p. 117–123 7 p.

**ELECTROCHEMICAL STUDY OF BILAYER CONDUCTING POLYMERS - POLYPYRROLE POLYANILINE SYSTEM**

GAO, ZQ., Bobacka, J. & Ivaska, A., 1994, In: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 364, 1-2, p. 127–133 7 p.

**MECHANISM OF IONIC AND REDOX SENSITIVITY OF P-TYPE CONDUCTING POLYMERS .1. THEORY**

Lewenstam, A., Bobacka, J. & Ivaska, A., 1994, In: Journal of Electroanalytical Chemistry. 368, 1-2, p. 23–31 9 p.

**MECHANISM OF IONIC AND REDOX SENSITIVITY OF P-TYPE CONDUCTING POLYMERS .2. EXPERIMENTAL-STUDY OF POLYPYRROLE**

Bobacka, J., GAO, ZQ., Ivaska, A. & Lewenstam, A., 1994, In: Journal of Electroanalytical Chemistry. 368, 1-2, p. 33-41 9 p.

**ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY OF COBALT(II)-HEXACYANOFERRATE FILM MODIFIED ELECTRODES**

GAO, ZQ., Bobacka, J. & Ivaska, A., 1993, In: Electrochimica Acta. 38, 2-3, p. 379-385 7 p.

**ELECTROCHEMICAL STUDY ON POLYPYRROLE - POLY(3-OCTYLTHIOPHENE) BILAYER FILMS**

Bobacka, J., GAO, ZQ. & Ivaska, A., 1993, In: Synthetic Metals. 55, 2-3, p. 1453-1458 6 p.

**ELECTROCHEMICAL STUDY ON THE POLYPYRROLE-POLYANILINE BILAYERS**

GAO, ZQ., Bobacka, J. & Ivaska, A., 1993, In: Synthetic Metals. 55, 2-3, p. 1477-1482 6 p.

**ION TRANSFER AT A POLY(3-OCTYLTHIOPHENE) FILM ELECTRODE**

GRZESZCZUK, M., Bobacka, J. & Ivaska, A., 1993, In: Journal of Electroanalytical Chemistry. 362, p. 287-289 3 p.

**POTENTIOMETRIC RESPONSE OF POLY(3-OCTYLTHIOPHENE), POLY(3-METHYLTHIOPHENE) AND POLYTHIOPHENE IN AQUEOUS-SOLUTIONS**

Bobacka, J., Lewenstam, A. & Ivaska, A., 1993, In: Talanta. 40, 9, p. 1437-1444 8 p.

**ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES - IMPEDANCE OF THE POLYMER FILM SEMICONDUCTOR ELECTROLYTE INTERFACE**

Bobacka, J., GRZESZCZUK, M. & Ivaska, A., 1992, In: Electrochimica Acta. 37, 10, p. 1759-1765 7 p.

**STUDIES OF THE MECHANICALLY GENERATED NOISE IN STATIC MERCURY DROP ELECTRODES**

ENGBLOM, S., Bobacka, J., Ivaska, A., NAGY, G., SARKANY, P. & PUNGOR, E., 1992, In: Talanta. 39, 7, p. 819-824 6 p.

**COMPARISON OF PROPERTIES OF ELECTROCHEMICALLY SYNTHESIZED POLY(3-OCTYLTHIOPHENE) USING MONOMER AND DIMER AS STARTING MATERIAL**

Bobacka, J. & Ivaska, A., 1991, In: Synthetic Metals. 43, 1-2, p. 3053-3058 6 p.

**ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES .1. ELECTROLYTE EFFECTS ON THE VOLTAMMETRIC CHARACTERISTICS OF THE POLYMER - 3 STATES OF THE POLYMER FILM**

Bobacka, J., Ivaska, A. & GRZESZCZUK, M., 1991, In: Synthetic Metals. 44, 1, p. 9-19 11 p.

**ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES .2. REVERSIBLE REDOX/CONDUCTIVITY STATE SWITCHING - IMPEDANCE STUDY**

Bobacka, J., Ivaska, A. & GRZESZCZUK, M., 1991, In: Synthetic Metals. 44, 1, p. 21-34 14 p.

**EXPERIENCES OF AN ONLINE FOURIER-TRANSFORM FARADAIC ADMITTANCE MEASUREMENT (FT-FAM) SYSTEM BASED ON DIGITAL SIGNAL PROCESSORS**

ENGBLOM, SO., Wasberg, M., Bobacka, J. & IVASKA, A., 1990, *Contemporary Electroanalytical Chemistry*. Ivaska, A., Lewenstam, A. & Sara, R. (eds.). Springer, p. 21-29 9 p.

**SMOOTHING OF AC-POLAROGRAPHIC DATA BY FFT FILTERING**

Bobacka, J. & Ivaska, A., 1990, *Contemporary Electroanalytical Chemistry*. Ivaska, A., Lewenstam, A. & Sara, R. (eds.). Springer, p. 37-46 10 p.